



**UNSATURATED POLYANHYDRIDES**

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A class of unsaturated polyanhydrides having double bonds available for secondary polymerization is disclosed. A crosslinked material having improved or different physical and mechanical properties can be prepared from these polyanhydrides, via secondary polymerization. The synthesis and characteristics of one unsaturated polyanhydride based on fumaric acid and its copolymers with aliphatic and aromatic diacids, prepared by either the melt-polycondensation method or by solution polymerization, is described in detail. These polymers are well suited for use in controlled release drug delivery devices. The polymers can also be used as a bioerodible bone cement where the polymer is first cast as a solution onto a bone fracture and then crosslinked by radiation or radical polymerization to yield a strong, adhesive material.

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